

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
13 October 2005 (13.10.2005)

PCT

(10) International Publication Number
WO 2005/095450 A3

(51) International Patent Classification⁷: **C07K 14/475**

TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number:
PCT/EP2005/051431

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(22) International Filing Date: 30 March 2005 (30.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
PA 2004 00510 30 March 2004 (30.03.2004) DK
60/575,086 28 May 2004 (28.05.2004) US
PA 2004 00843 28 May 2004 (28.05.2004) DK

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations
- of inventorship (Rule 4.17(iv)) for US only

(71) Applicant (for all designated States except US): **NSGENE A/S** [DK/DK]; Baltorpevej 154, DK-2750 Ballerup (DK).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **GRØNBORG, Mette** [DK/DK]; Nebbegårdsbakken 51, DK-2400 København NV (DK). **KUSK, Philip** [DK/DK]; Baunesvinget 20, DK-3540 Lyngby (DK). **BLOM, Nikolaj** [DK/DK]; Nebbegårdsbakken 51, DK-2400 København NV (DK). **PETERSEN, Thomas, Nordahl** [DK/DK]; Hillerødsgade 55, st. th., DK-2200 København N (DK). **JOHANSEN, Teit, E.** [DK/DK]; Stampeengen 26, DK-2970 Hørsholm (DK). **BRUNAK, Søren** [DK/DK]; Gammel Vartov Vej 22, DK-2900 Hellerup (DK). **WAHLBERG, Lars** [SE/DK]; Veddingevej 14 Høve, DK-4550 Asnæs (DK).

(74) Agent: **NØRGAARD, Jens Viktor**; NsGene A/S, Baltorpevej 154, DK-2750 Ballerup (DK).

Published:

- with international search report
- with sequence listing part of description published separately in electronic form and available upon request from the International Bureau

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY,

(88) Date of publication of the international search report:

5 January 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: THERAPEUTIC USE OF A GROWTH FACTOR, NSG33

(57) Abstract: The present invention relates to the field of therapeutic use of proteins, genes and cells. More specifically the invention relates to therapy based on the biological function of a secreted therapeutic protein, NsG33, in particular for the treatment of disorders of the nervous system. NsG33 is a nerve survival and growth factor with antiapoptotic effects on a cell line with neuronal potential and with neuroprotective and/or neurogenesis effects on a neural precursor cell line and on primary striatal cultures. The invention also relates to novel bioactive NsG33 polypeptide fragments and the corresponding encoding DNA sequences.



WO 2005/095450 A3